

LISTING OF CLAIMS

The current listing of the claims replaces all previous amendments and listings of the claims.

1. (Currently amended) A remote management system for performing remote management of a plurality of electronic apparatuses via a communication line and an intermediary apparatus by a remote managing apparatus, wherein:
the remote managing apparatus comprises:
 - a first storage part that stores first software configured to update second software stored by each of the electronic apparatuses; and
 - a remote managing apparatus software transmitting part that transmits the first software retrieved from the first storage part to the intermediary apparatus via the communication line;

a schedule generating part that generates an update date and time for updating the second software; and

a schedule transmitting part that transmits the generated update date and time to the intermediary apparatus;

the intermediary apparatus comprises:
 - a second storage part;
 - a software writing part that writes the first software to the second storage part when acquiring the first software from the remote managing apparatus software transmitting part; and

an intermediary apparatus software transmitting part that transmits the first software stored in the second storage part to at least one of the electronic apparatuses

when the at least one of the electronic apparatuses requires the second software stored therein to be updated; and

a transmission rate measuring part that measures a first transmission rate between the intermediary apparatus and the remote managing apparatus and a second transmission rate between the intermediary apparatus and the at least one of the electronic apparatus; and

a transmission rate reporting part that reports the first and second transmission rates to the remote managing apparatus;

the electronic apparatuses each comprises:

a non-volatile storage part storing the second software controlling an operation of the electronic apparatus; and

a software updating part that updates the second software stored in the non-volatile storage part based on the first software when receiving the first software from the intermediary apparatus software transmitting part, wherein the schedule generating part of the remote managing apparatus generates the update date and time based on an amount of data of the first software stored in the first storage part and the first and second transmission rates received from the intermediary apparatus.

2. (Original) The remote management system as claimed in claim 1, wherein, when two or more of the electronic apparatuses require the second software thereof to be updated, the software transmitting part of the intermediary apparatus transmits the first software stored in the second storage part to each of the two or more of the electronic apparatuses.

3. (Previously presented) The remote management system as claimed in claim 2, wherein

the first software stored in the first storage part of the remote managing apparatus comprises software programs of different types;

the second software differs in type between two or more of the electronic apparatuses; and

the intermediary apparatus software transmitting part transmits two or more of the software programs of the first software to the two or more of the electronic apparatuses in accordance with the types of the second software thereof.

4. (Currently amended) The remote management system as claimed in claim 1, wherein:

~~the remote managing apparatus further comprises:~~

~~a schedule generating part that generates an update date and time for updating the second software; and~~

~~a schedule transmitting part that transmits the generated update date and time to the intermediary apparatus;~~

the remote managing apparatus software transmitting part transmits the first software stored in the first storage part to the intermediary apparatus at a request thereof; and

the intermediary apparatus further comprises:

a schedule writing part that writes the update date and time to the second storage part when receiving the update date and time from the remote managing apparatus; and

a transmission requesting part that requests the remote managing apparatus to transmit the first software to the intermediary apparatus when the update date and time stored in the second storage part is reached.

5. (Canceled).

6. (Previously presented) The remote management system as claimed in claim 4,
wherein:

the intermediary apparatus software transmitting part comprises a communication requesting part that makes a communication request to the at least one of the electronic apparatuses for communication with the intermediary apparatus before transmitting the first software stored in the second storage part to the at least one of the electronic apparatuses, and transmits the first software stored in the second storage part to the at least one of the electronic apparatuses when receiving a response to said communication request therefrom; and

each of the electronic apparatuses comprises a response part that responds to said communication request when receiving said communication request from the intermediary apparatus.

7. (Previously presented) The remote management system as claimed in claim 4,
wherein:

the intermediary apparatus software transmitting part comprises a communication requesting part that makes a communication request for the at least one of the electronic apparatuses to communicate with the intermediary apparatus before transmitting the first software stored in the second storage part to the at least one of the electronic apparatuses; and each of the electronic apparatuses comprises:

a deferment period managing part that manages a performance deferment period from when said communication request from the intermediary apparatus is received to when it becomes possible to update the second software; and

a response part that responds to said communication request after passage of the performance deferment period.

8. (Previously presented) The remote management system as claimed in claim 4, wherein:

the intermediary apparatus further comprises:

a status checking part that checks a status of the at least one of the electronic apparatuses; and

an update date and time changing part that changes the update date and time stored in the second storage part so that a start of the updating of the second software is deferred for a predetermined period of time when it is determined based on a result of the checking by the status checking part that the at least one of the electronic apparatuses is prevented from starting the updating of the second software immediately.

9. (Original) The remote management system as claimed in claim 4, wherein the intermediary apparatus further comprises an update date and time changing part that changes the update date and time stored in the second storage part so that a start of the updating of the second software is deferred for a predetermined period of time when receiving a request to defer the updating of the second software from outside the intermediary apparatus.

10. (Currently amended) The remote management system as claimed in claim 1,
wherein:

~~the remote managing apparatus further comprises a schedule generating part
generating a transmission date and time for transmitting the first software and an update date
and time for updating the second software;~~

the remote managing apparatus software transmitting part transmits the first software stored in the first storage part and the generated update date and time to the intermediary apparatus when the generated transmission date and time is reached;

the software writing part of the intermediary apparatus writes the first software and the update date and time to the second storage part when receiving the first software and the update date and time from the remote managing apparatus transmitting part; and

the intermediary apparatus software transmitting part transmits the first software stored in the second storage part to the at least one of the electronic apparatuses when the update date and time stored in the storage part is reached.

11. (Currently amended) The remote management system as claimed in claim 10,
wherein:

~~the intermediary apparatus further comprises:~~

~~a transmission rate measuring part measuring a first transmission rate between
the intermediary apparatus and the remote managing apparatus and a second
transmission rate between the intermediary apparatus and the at least one of the
electronic apparatus; and~~

~~a transmission rate reporting part reporting the first and second transmission
rates to the managing apparatus; and~~

the schedule generating part of the remote managing apparatus generates the transmission date and time and the update date and time based on an amount of data of the first software stored in the first storage part and the first and second transmission rates received from the intermediary apparatus.

12. (Previously presented) The remote management system as claimed in claim 10, wherein:

the intermediary apparatus software transmitting part comprises a communication requesting part that makes a communication request to the at least one of the electronic apparatuses for communication with the intermediary apparatus before transmitting the first software stored in the second storage part to the at least one of the electronic apparatuses, and transmits the first software stored in the second storage part to the at least one of the electronic apparatuses when receiving a response to said communication request therefrom; and

each of the electronic apparatuses comprises a response part that responds to said communication request when receiving said communication request from the intermediary apparatus.

13. (Previously presented) The remote management system as claimed in claim 10, wherein:

the intermediary apparatus software transmitting part comprises a communication requesting part that makes a communication request for the at least one of the electronic apparatuses to communicate with the intermediary apparatus before transmitting the first software stored in the second storage part to the at least one of the electronic apparatuses; and each of the electronic apparatuses comprises:

a deferment period managing part that manages a performance deferment period from when said communication request from the intermediary apparatus is received to when it becomes possible to update the second software; and a response part that responds to said communication request after passage of the performance deferment period.

14. (Previously presented) The remote management system as claimed in claim 10, wherein:

the intermediary apparatus further comprises:

a status checking part that checks a status of the at least one of the electronic apparatuses; and

an update date and time changing part that changes the update date and time stored in the second storage part so that a start of the updating of the second software is deferred for a predetermined period of time when it is determined based on a result of the checking by the status checking part that the at least one of the electronic apparatuses is prevented from starting the updating of the second software immediately.

15. (Original) The remote management system as claimed in claim 10, wherein the intermediary apparatus further comprises an update date and time changing part that changes the update date and time stored in the second storage part so that a start of the updating of the second software is deferred for a predetermined period of time when receiving a request to defer the updating of the second software from outside the intermediary apparatus.

16. (Previously presented) The remote management system as claimed in claim 1,
wherein:

the intermediary apparatus comprises a status checking part that checks a status of the
at least one of the electronic apparatuses; and

the intermediary apparatus software transmitting part comprises an updating necessity
determining part that determines whether the updating of the second software of the at least
one of the electronic apparatuses has normally ended based on a result of the checking by the
status checking part, and repeats the transmission of the first software stored in the second
storage to the at least one of the electronic apparatuses until the updating necessity
determining part determines that the updating of the second software of the at least one of the
electronic apparatuses has normally ended.

17. (Previously presented) The remote management system as claimed in claim 16,
wherein:

the updating necessity determining part of the intermediary apparatus determines that
the updating of the second software of the at least one of the electronic apparatuses has
normally ended when receiving a power-on report indicating that power is turned on from the
at least one of the electronic apparatuses; and

each of the electronic apparatuses comprises:

a restart commanding part that causes the electronic apparatus to restart after
the updating of the second software by the software updating part is completed; and
a power-on reporting part that reports to the intermediary apparatus that the
power is turned on after the restarting of the electronic apparatus.

18. (Previously presented) The remote management system as claimed in claim 16, wherein the software transmitting part of the intermediary apparatus comprises a part that stops the transmission of the first software to the at least one of the electronic apparatuses when the transmission is prevented from being completed by a preset expiration date and time.

19. (Original) The remote management system as claimed in claim 1, wherein the software updating part of each of the electronic apparatuses comprises a part that cancels the updating of the second software when receiving a request to cancel the updating of the software from outside the electronic apparatus.

20. (Currently amended) An intermediary apparatus connected to a remote managing apparatus via a communication line so as to control communication between the remote managing apparatus and one or more electronic apparatuses managed remotely by the remote managing apparatus, the intermediary apparatus comprising:

an intermediary apparatus storage part;
a software writing part that writes first software to the intermediary apparatus storage part after receiving the first software from the remote managing apparatus; and

an intermediary apparatus software transmitting part that transmits the first software stored in the intermediary apparatus storage part to at least one of the electronic apparatuses that each store second software therein when the at least one of the electronic apparatuses requires the second software to be updated;

a transmission rate measuring part that measures a first transmission rate between the intermediary apparatus and the remote managing apparatus and a second transmission rate between the intermediary apparatus and the at least one of the electronic apparatus; and

a transmission rate reporting part that reports the first and second transmission rates to the remote managing apparatus so that the remote managing apparatus generates an update date and time for updating the second software based on the reported first and second transmission rates and transmits the generated update date and time to the intermediary apparatus for the second software to be updated.

21. (Previously presented) The intermediary apparatus as claimed in claim 20, wherein, when two or more of the electronic apparatuses require the second software stored therein to be updated, the intermediary apparatus software transmitting part transmits the first software to each of the two or more of the electronic apparatuses.

22. (Previously presented) The intermediary apparatus as claimed in claim 21, wherein the first software comprises software programs of different types; the second software differs in type between two or more of the electronic apparatuses; and

the intermediary apparatus software transmitting part transmits two or more of the software programs of the first software to the two or more of the electronic apparatuses in accordance with the types of the second software thereof.

23. (Currently amended) The intermediary apparatus as claimed in claim 20, further comprising:

a schedule writing part that writes ~~an~~ the update date and time to the intermediary apparatus storage part when receiving the update date and time from the remote managing apparatus; and

a transmission requesting part that requests the remote managing apparatus to transmit the first software to the intermediary apparatus when the update date and time stored in the intermediary apparatus storage part is reached.

24. (Previously presented) The intermediary apparatus as claimed in claim 23, wherein the intermediary apparatus software transmitting part comprises a communication requesting part that makes a communication request to the at least one of the electronic apparatuses for communication with the intermediary apparatus before transmitting the first software stored in the intermediary apparatus storage part to the at least one of the electronic apparatuses, and transmits the first software stored in the intermediary apparatus storage part to the at least one of the electronic apparatuses when receiving a response to said communication request therefrom.

25. (Previously presented) The intermediary apparatus as claimed in claim 23, further comprising:

a status checking part that checks a status of the at least one of the electronic apparatuses; and

an update date and time changing part that changes the update date and time stored in the intermediary apparatus storage part so that a start of updating of the second software is deferred for a predetermined period of time when it is determined based on a result of the checking by the status checking part that the at least one of the electronic apparatuses is prevented from starting the updating of the second software immediately.

26. (Previously presented) The intermediary apparatus as claimed in claim 23, further comprising an update date and time changing part that changes the update date and time

stored in the intermediary apparatus storage part so that a start of updating of the second software is deferred for a predetermined period of time when receiving a request to defer the updating of the second software from outside the intermediary apparatus.

27. (Previously presented) The intermediary apparatus as claimed in claim 26, wherein the intermediary apparatus software transmitting part comprises a part that stops the transmission of the first software to the at least one of the electronic apparatuses when the transmission is prevented from being completed by a preset expiration date and time.

28. (Currently amended) The intermediary apparatus as claimed in claim 20, wherein:
the software writing part writes the first software and ~~an~~ the update date and time to the intermediary apparatus storage part when receiving the first software and the update date and time from the remote managing apparatus; and

the intermediary apparatus software transmitting part transmits the first software stored in the intermediary apparatus storage part to the at least one of the electronic apparatuses when the update date and time stored in the intermediary apparatus storage part is reached.

29. (Previously presented) The intermediary apparatus as claimed in claim 28, wherein the intermediary apparatus software transmitting part comprises a communication requesting part that makes a communication request to the at least one of the electronic apparatuses for communication with the intermediary apparatus before transmitting the first software stored in the intermediary apparatus storage part to the at least one of the electronic apparatuses, and transmits the first software stored in the intermediary apparatus storage part

to the at least one of the electronic apparatuses when receiving a response to said communication request therefrom.

30. (Previously presented) The intermediary apparatus as claimed in claim 28, further comprising:

a status checking part that checks a status of the at least one of the electronic apparatuses; and

an update date and time changing part that changes the update date and time stored in the intermediary apparatus storage part so that a start of updating of the second software is deferred for a predetermined period of time when it is determined based on a result of the checking by the status checking part that the at least one of the electronic apparatuses is prevented from starting the updating of the second software immediately.

31. (Previously presented) The intermediary apparatus as claimed in claim 28, further comprising an update date and time changing part that changes the update date and time stored in the intermediary apparatus storage part so that a start of updating of the second software is deferred for a predetermined period of time when receiving a request to defer the updating of the second software from outside the intermediary apparatus.

32. (Previously presented) The intermediary apparatus as claimed in claim 31, wherein the intermediary apparatus software transmitting part comprises a part that stops the transmission of the first software to the at least one of the electronic apparatuses when the transmission is prevented from being completed by a preset expiration date and time.

33. (Previously presented) The intermediary apparatus as claimed in claim 20, further comprising a status checking part that checks a status of the at least one of the electronic apparatuses; and

the intermediary apparatus software transmitting part comprises an updating necessity determining part that determines whether updating of the second software of the at least one of the electronic apparatuses has normally ended based on a result of the checking by the status checking part, and repeats the transmission of the first software stored in the intermediary apparatus storage part to the at least one of the electronic apparatuses until the updating necessity determining part determines that the updating of the second software of the at least one of the electronic apparatuses has normally ended.

34. (Previously presented) The intermediary apparatus as claimed in claim 33, wherein the updating necessity determining part determines that the updating of the second software of the at least one of the electronic apparatuses has normally ended when receiving a power-on report indicating that power is turned on from the at least one of the electronic apparatuses

35. (Previously presented) The intermediary apparatus as claimed in claim 33, wherein the software transmitting part comprises a part that stops the transmission of the first software to the at least one of the electronic apparatuses when the transmission is prevented from being completed by a preset expiration date and time.

36. (Currently amended) A software updating method in an intermediary apparatus connected to a remote managing apparatus via a communication line so as to control communication between the remote managing apparatus and one or more electronic

apparatuses managed remotely by the managing apparatus, the software updating method comprising the steps of:

- (a) writing an update date and time to an intermediary apparatus storage part in the intermediary apparatus when the update date and time is received from the remote managing apparatus;
- (b) requesting the remote managing apparatus to transmit first software to the intermediary apparatus when the update date and time in the storage part is reached; and
- (c) writing the first software to the intermediary apparatus storage part when the first software transmitted in response to said step (b) from the remote managing apparatus is acquired, transmitting the first software in the intermediary apparatus storage part to at least one of the electronic apparatuses when the at least one of the electronic apparatuses requires second software stored therein to be updated, and causing the at least one of the electronic apparatuses to update the second software stored therein, wherein
a first transmission rate between the intermediary apparatus and the remote managing apparatus and a second transmission rate between the intermediary apparatus and the at least one of the electronic apparatus are measured in the intermediary apparatus, and
the first and second transmission rates are reported from the intermediary apparatus to the remote managing apparatus so that the remote managing apparatus generates the update date and time for updating the second software based on the reported first and second transmission rates and transmits the generated update date and time to the intermediary apparatus for the second software to be updated.

37. (Currently Amended) The software updating method as claimed in claim 36, further comprising the step of:

(d) checking a status of the at least one of the electronic apparatuses; and
(e) changing the update date and time stored in the intermediary apparatus storage part so that a start of the updating of the second software is deferred for a predetermined period of time when it is determined based on a result of the checking by said step (d) that the at least one of the electronic apparatuses is prevented from starting the updating of the second software immediately.

38. (Currently Amended) The software updating method as claimed in claim 36, further comprising the step of (d) changing the update date and time stored in the intermediary apparatus storage part so that a start of the updating of the second software is deferred for a predetermined period of time when receiving a request to defer the updating of the second software from outside the intermediary apparatus.

39. (Currently Amended) The software updating method as claimed in claim 36, further comprising the steps of:

(d) checking a status of the at least one of the electronic apparatuses; and
(e) repeating the transmission of the first software stored in the intermediary apparatus storage part to the at least one of the electronic apparatuses until it is determined based on a result of the checking by said step (d) that the updating of the second software of the at least one of the electronic apparatuses has normally ended.

40. (Currently Amended) The software updating method as claimed in claim 39, further comprising the step of (f) stopping the transmission of the first software to the at least one of the electronic apparatuses when the transmission is prevented from being completed by a preset expiration date and time.

41. (Currently Amended) A software updating method in an intermediary apparatus connected to a remote managing apparatus via a communication line so as to control communication between the remote managing apparatus and one or more electronic apparatuses managed remotely by the remote managing apparatus, the software updating method comprising the steps of:

(a) writing first software and an update date and time to an intermediary apparatus storage part in the intermediary apparatus when the first software and the update date and time are received from the remote managing apparatus; and

(b) transmitting the first software in the intermediary apparatus storage part to at least one of the electronic apparatuses when the at least one requires second software thereof to be updated and causing the at least one of the electronic apparatuses to update the second software stored therein when the update date and time in the intermediary apparatus storage part is reached, wherein

a first transmission rate between the intermediary apparatus and the remote managing apparatus and a second transmission rate between the intermediary apparatus and the at least one of the electronic apparatus are measured in the intermediary apparatus, and

the first and second transmission rates are reported from the intermediary apparatus to the remote managing apparatus so that the remote managing apparatus generates the update date and time for updating the second software based on the reported first and second

transmission rates and transmits the generated update date and time to the intermediary apparatus for the second software to be updated.

42. (Currently Amended) The software updating method as claimed in claim 41, further comprising the step of:

(c) checking a status of the at least one of the electronic apparatuses; and
(d) changing the update date and time stored in the intermediary apparatus storage part so that a start of the updating of the second software is deferred for a predetermined period of time when it is determined based on a result of the checking by said step (c) that the at least one of the electronic apparatuses is prevented from starting the updating of the second software immediately.

43. (Currently Amended) The software updating method as claimed in claim 41, further comprising the step of (c) changing the update date and time stored in the intermediary apparatus storage part so that a start of the updating of the second software is deferred for a predetermined period of time when receiving a request to defer the updating of the second software from outside the intermediary apparatus.

44. (Currently Amended) The software updating method as claimed in claim 41, further comprising the steps of:
(c) checking a status of the at least one of the electronic apparatuses; and
(d) repeating the transmission of the first software stored in the intermediary apparatus storage part to the at least one of the electronic apparatuses until it is determined based on a result of the checking by said step (c) that the updating of the second software of the at least one of the electronic apparatuses has normally ended.

45. (Currently Amended) The software updating method as claimed in claim 44, further comprising the step of (e) stopping the transmission of the first software to the at least one of the electronic apparatuses when the transmission is prevented from being completed by a preset expiration date and time.

46. (Currently Amended) A software updating method in an intermediary apparatus connected to a remote managing apparatus via a communication line so as to control communication between the remote managing apparatus and one or more electronic apparatuses managed remotely by the managing apparatus, the software updating method comprising the steps of:

(a) writing first software to an intermediary apparatus storage part in the intermediary apparatus when the first software is received from the remote managing apparatus; and

(b) transmitting the first software stored in the intermediary apparatus storage part to at least one of the electronic apparatuses that each store second software therein when the at least one of the electronic apparatuses requires the second software stored therein to be updated, wherein

a first transmission rate between the intermediary apparatus and the remote managing apparatus and a second transmission rate between the intermediary apparatus and the at least one of the electronic apparatus are measured in the intermediary apparatus, and

the first and second transmission rates are reported from the intermediary apparatus to the remote managing apparatus so that the remote managing apparatus generates the update date and time for updating the second software based on the reported first and second transmission rates and transmits the generated update date and time to the intermediary apparatus for the second software to be updated.

47. (Previously presented) The software updating method as claimed in claim 46, wherein, when two or more of the electronic apparatuses require the second software stored therein to be updated, said step (b) includes transmitting the first software to each of the two or more of the electronic apparatuses.

48. (Previously presented) The software updating method as claimed in claim 47, wherein

the first software comprises software programs of different types;

the second software differs in type between two or more of the electronic apparatuses;

and

said step (b) includes transmitting two or more of the software programs of the first software to the two or more of the electronic apparatuses in accordance with the types of the second software thereof.

49. (Currently amended) The software updating method as claimed in claim 46, further comprising the steps of:

(c) writing ~~an~~ the update date and time to the intermediary apparatus storage part when the update date and time is received from the remote managing apparatus; and

(d) requesting the remote managing apparatus to transmit the first software to the intermediary apparatus when the update date and time stored in the intermediary apparatus storage part is reached.

50. (Previously presented) The software updating method as claimed in claim 49, wherein said step (b) comprises the step of (e) making a communication request to the at least

one of the electronic apparatuses for communication with the intermediary apparatus before transmitting the first software stored in the storage part to the at least one of the electronic apparatuses, and transmitting the first software stored in the intermediary apparatus storage part to the at least one of the electronic apparatuses when a response to said communication request is received therefrom.

51. (Previously presented) The software updating method as claimed in claim 49, further comprising the steps of:

(e) checking a status of the at least one of the electronic apparatuses; and
(f) changing the update date and time stored in the intermediary apparatus storage part so that a start of updating of the second software is deferred for a predetermined period of time when it is determined based on a result of the checking by said step (e) that the at least one of the electronic apparatuses is prevented from starting the updating of the second software immediately.

52. (Previously presented) The software updating method as claimed in claim 49, further comprising the step of (e) changing the update date and time stored in the intermediary apparatus storage part so that a start of updating of the second software is deferred for a predetermined period of time when a request to defer the updating of the second software is received from outside the intermediary apparatus.

53. (Previously presented) The software updating method as claimed in claim 52, wherein said step (b) comprises the step of (f) stopping the transmission of the first software to the at least one of the electronic apparatuses when the transmission is prevented from being completed by a preset expiration date and time.

54. (Currently amended) The software updating method as claimed in claim 46,
wherein:

said step (a) writes the first software and ~~an~~ the update date and time to the intermediary apparatus storage part when the first software and the update date and time are received from the remote managing apparatus; and

said step (b) includes transmitting the first software stored in the intermediary apparatus storage part to the at least one of the electronic apparatuses when the update date and time stored in the intermediary apparatus storage part is reached.

55. (Previously presented) The software updating method as claimed in claim 54,
wherein said step (b) comprises the step of (c) making a communication request to the at least one of the electronic apparatuses for communication with the intermediary apparatus before transmitting the first software stored in the intermediary apparatus storage part to the at least one of the electronic apparatuses, and transmitting the first software stored in the intermediary apparatus storage part to the at least one of the electronic apparatuses when a response to said communication request is received therefrom.

56. (Previously presented) The software updating method as claimed in claim 54,
further comprising the steps of:

(c) checking a status of the at least one of the electronic apparatuses; and
(d) changing the update date and time stored in the intermediary apparatus storage part so that a start of updating of the second software is deferred for a predetermined period of time when it is determined based on a result of the checking by said step (c) that the at

least one of the electronic apparatuses is prevented from starting the updating of the second software immediately.

57. (Previously presented) The software updating method as claimed in claim 54, further comprising the step of (c) changing the update date and time stored in the intermediary apparatus storage part so that a start of updating of the second software is deferred for a predetermined period of time when a request to defer the updating of the second software is received from outside the intermediary apparatus.

58. (Previously presented) The software updating method as claimed in claim 57, wherein said step (b) comprises the step of stopping the transmission of the first software to the at least one of the electronic apparatuses when the transmission is prevented from being completed by a preset expiration date and time.

59. (Previously presented) The software updating method as claimed in claim 46, further comprising the step of (c) checking a status of the at least one of the electronic apparatuses,

wherein said step (b) comprises the step of (d) determining whether updating of the second software of the at least one of the electronic apparatuses has normally ended based on a result of the checking by said step (c), and repeating the transmission of the first software stored in the intermediary apparatus storage part to the at least one of the electronic apparatuses until said step (d) determines that the updating of the second software of the one of the electronic apparatuses has normally ended.

60. (Previously presented) The software updating method as claimed in claim 59, wherein said step (d) includes determining that the updating of the second software of the at least one of the electronic apparatuses has normally ended when a power-on report indicating that power is turned on is received from the at least one of the electronic apparatuses.

61. (Previously presented) The software updating method as claimed in claim 59, wherein said step (b) comprises the step of (e) stopping the transmission of the first software to the at least one of the electronic apparatuses when the transmission is prevented from being completed by a preset expiration date and time.

62. (Currently Amended) A tangible computer-readable recording medium product storing a program for causing a computer to execute a software updating method in an intermediary apparatus connected to a remote managing apparatus via a communication line so as to control communication between the remote managing apparatus and one or more electronic apparatuses managed remotely by the remote managing apparatus, the software updating method comprising the steps of:

- (a) writing first software to a an intermediary apparatus storage part of in the intermediary apparatus when the first software is received from the remote managing apparatus; and
- (b) transmitting the first software stored in the intermediary apparatus storage part to at least one of the electronic apparatuses each storing second software therein, ~~which~~ the at least one of the electronic apparatuses having second software stored therein that is to be updated, wherein

a first transmission rate between the intermediary apparatus and the remote managing apparatus and a second transmission rate between the intermediary apparatus and the at least one of the electronic apparatus are measured in the intermediary apparatus, and
the first and second transmission rates are reported from the intermediary apparatus to the remote managing apparatus so that the remote managing apparatus generates the update date and time for updating the second software based on the reported first and second transmission rates and transmits the generated update date and time to the intermediary apparatus for the second software to be updated.

63. (Previously presented) The tangible computer-readable recording medium product as claimed in claim 62, wherein, when two or more of the electronic apparatuses require the second software stored therein to be updated, said step (b) includes transmitting the first software to each of the two or more of the electronic apparatuses.

64. (Previously presented) The tangible computer-readable recording medium product as claimed in claim 63, wherein

the first software comprises software programs of different types;
the second software differs in type between two or more of the electronic apparatuses;
and

said step (b) includes transmitting two or more of the software programs of the first software to the two or more of the electronic apparatuses in accordance with the types of the second software thereof.

65. (Currently amended) The tangible computer-readable recording medium product as claimed in claim 62, wherein the software updating method further comprises the steps of:

(c) writing ~~an~~ the update date and time to the intermediary apparatus storage part when the update date and time is received from the remote managing apparatus; and

(d) requesting the remote managing apparatus to transmit the first software to the intermediary apparatus when the update date and time stored in the intermediary apparatus storage part is reached.

66. (Previously presented) The tangible computer-readable recording medium product as claimed in claim 65, wherein said step (b) comprises the step of (e) making a communication request to the at least one of the electronic apparatuses for communication with the intermediary apparatus before transmitting the first software stored in the intermediary apparatus storage part to the at least one of the electronic apparatuses, and transmitting the first software stored in the intermediary apparatus storage part to the at least one of the electronic apparatuses when a response to said communication request is received therefrom.

67. (Previously presented) The tangible computer-readable recording medium product as claimed in claim 65, wherein the software updating method further comprises the steps of:

(e) checking a status of the at least one of the electronic apparatuses; and

(f) changing the update date and time stored in the intermediary apparatus storage part so that a start of updating of the second software is deferred for a predetermined period of time when it is determined based on a result of the checking by said step (e) that the at least one of the electronic apparatuses is prevented from starting the updating of the second software immediately.

68. (Previously presented) The tangible computer-readable recording medium product as claimed in claim 65, wherein the software updating method further comprises the step of (e) changing the update date and time stored in the intermediary apparatus storage part so that a start of updating of the second software is deferred for a predetermined period of time when a request to defer the updating of the second software is received from outside the intermediary apparatus.

69. (Previously presented) The tangible computer-readable recording medium product as claimed in claim 68, wherein said step (b) comprises the step of (f) stopping the transmission of the first software to the at least one of the electronic apparatuses when the transmission is prevented from being completed by a preset expiration date and time.

70. (Currently amended) The tangible computer-readable recording medium product as claimed in claim 62, wherein:

 said step (a) includes writing the first software and ~~an~~ the update date and time to the intermediary apparatus storage part when the first software and the update date and time are received from the remote managing apparatus; and

 said step (b) includes transmitting the first software stored in the intermediary apparatus storage part to the at least one of the electronic apparatuses when the update date and time stored in the intermediary apparatus storage part is reached.

71. (Previously presented) The tangible computer-readable recording medium product as claimed in claim 70, wherein said step (b) comprises the step of (c) making a communication request to the at least one of the electronic apparatuses for communication with the intermediary apparatus before transmitting the first software stored in the

intermediary apparatus storage part to the at least one of the electronic apparatuses, and transmitting the first software stored in the intermediary apparatus storage part to the at least one of the electronic apparatuses when a response to said communication request is received therefrom.

72. (Previously presented) The tangible computer-readable recording medium product as claimed in claim 70, wherein the software updating method further comprises the steps of:

(c) checking a status of the at least one of the electronic apparatuses; and
(d) changing the update date and time stored in the intermediary apparatus storage part so that a start of updating of the second software is deferred for a predetermined period of time when it is determined based on a result of the checking by said step (c) that the at least one of the electronic apparatuses is prevented from starting the updating of the second software immediately.

73. (Previously presented) The tangible computer-readable recording medium product as claimed in claim 70, wherein the software updating method further comprises the step of
(c) changing the update date and time stored in the intermediary apparatus storage part so that a start of updating of the second software is deferred for a predetermined period of time when a request to defer the updating of the second software is received from outside the intermediary apparatus.

74. (Previously presented) The tangible computer-readable recording medium product as claimed in claim 73, wherein said step (b) comprises the step of stopping the transmission of the first software to the at least one of the electronic apparatuses when the transmission is prevented from being completed by a preset expiration date and time.

75. (Previously presented) The tangible computer-readable recording medium product as claimed in claim 62, wherein:

the software updating method further comprises the step of (c) checking a status of the at least one of the electronic apparatuses; and

said step (b) comprises the step of (d) determining whether updating of the second software of the at least one of the electronic apparatuses has normally ended based on a result of the checking by said step (c), and repeating the transmission of the first software stored in the intermediary apparatus storage part to the at least one of the electronic apparatuses until said step (d) determines that the updating of the second software of the at least one of the electronic apparatuses has normally ended.

76. (Previously presented) The tangible computer-readable recording medium product as claimed in claim 75, wherein said step (d) includes determining that the updating of the second software of the at least one of the electronic apparatuses has normally ended when a power-on report indicating that power is turned on is received from the at least one of the electronic apparatuses.

77. (Previously presented) The tangible computer-readable recording medium product as claimed in claim 75, wherein said step (b) comprises the step of (e) stopping the transmission of the first software to the at least one of the electronic apparatuses when the transmission is prevented from being completed by a preset expiration date and time.

Claim 78 (Canceled).